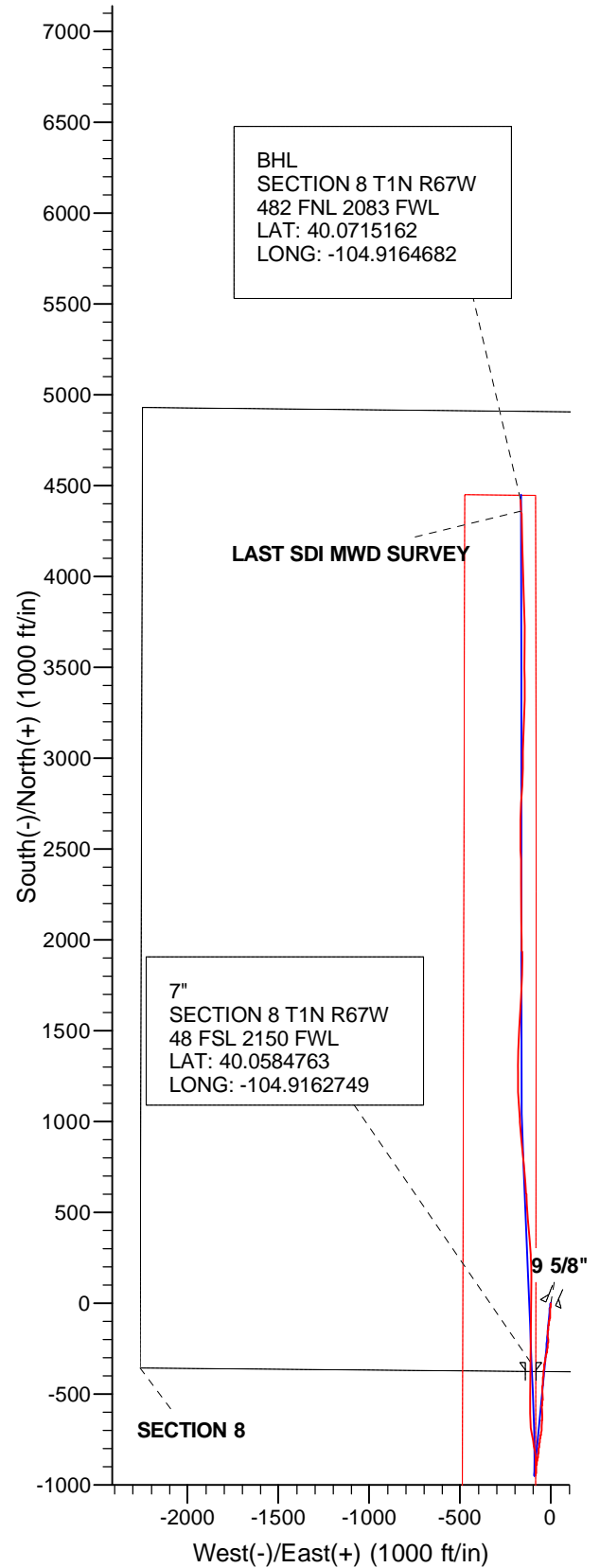
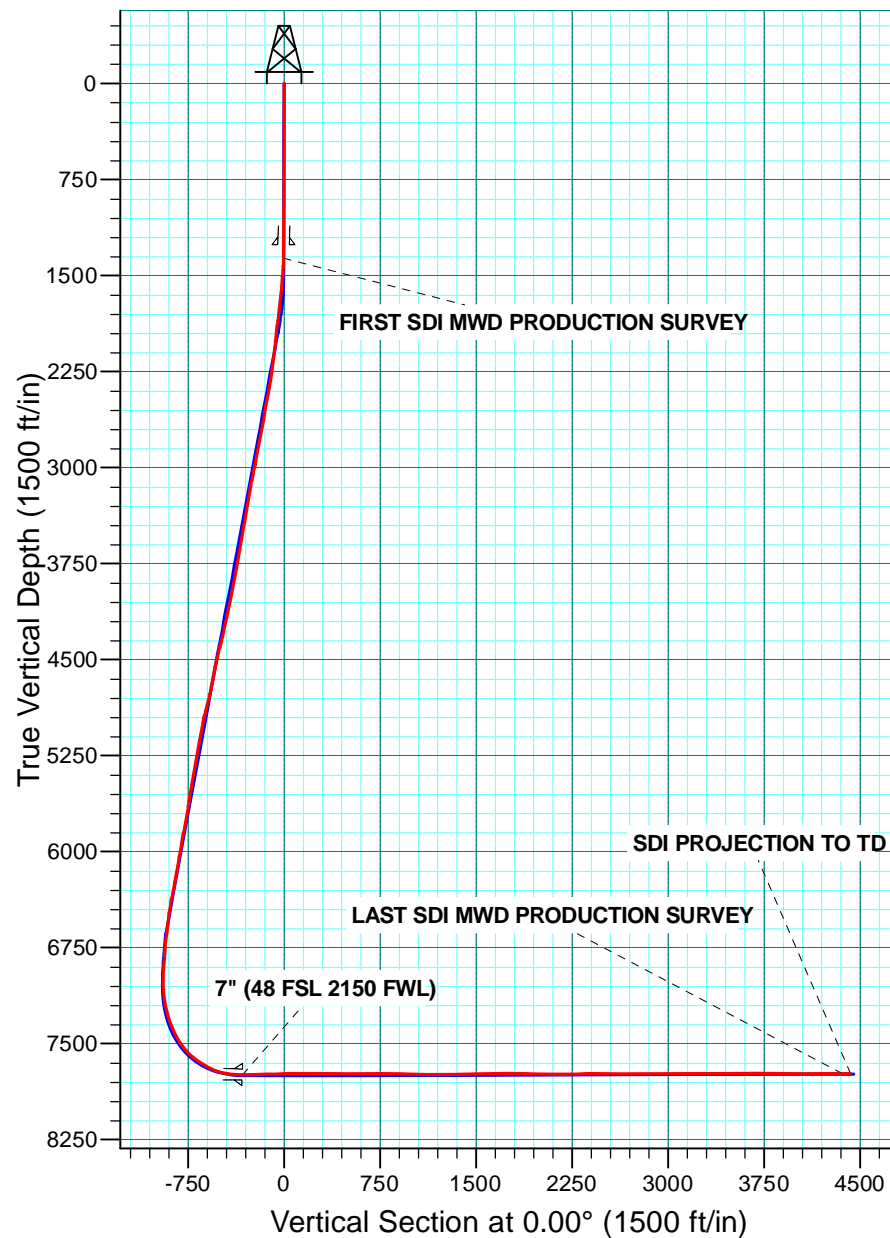


WELL DETAILS: NRC 3C-8HZ

GL 5052 & KB 25 @ 5077.00ft (H&P 311)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1265013.44	3163501.06	40.0593730	-104.9158750



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**NRC 14-8HZ PAD**

**NRC 3C-8HZ**

**OH**

**Design: OH**

## **Standard Survey Report**

**31 March, 2014**

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NRC 3C-8HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Site:</b>	NRC 14-8HZ PAD	<b>MD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Well:</b>	NRC 3C-8HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	NRC 14-8HZ PAD, SECTION 8 T1N R67W		
<b>Site Position:</b>		<b>Northing:</b>	1,265,039.58 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,163,486.62 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	40.0594450
		<b>Longitude:</b>	-104.9159260
		<b>Grid Convergence:</b>	0.38 °

<b>Well</b>	NRC 3C-8HZ, 376 FSL 2259 FWL		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b> 1,265,013.43 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b> 3,163,501.06 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
		<b>Latitude:</b>	40.0593730
		<b>Longitude:</b>	-104.9158750
		<b>Ground Level:</b>	5,052.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	2/27/2014	8.59	66.65	52,569

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00		0.00

<b>Survey Program</b>	<b>Date</b>	3/31/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.00	1,134.00	Survey #1 SURFACE GYRO (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,363.00	12,929.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI_MWD+CRUST_1.0	SDI MWD + Crustal anomaly, Version 1.0	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.49	184.19	100.00	-0.43	-0.03	-0.43	0.49	0.49	0.00	
<b>FIRST SURFACE GYRO SURVEY</b>										
200.00	0.21	302.16	200.00	-0.76	-0.22	-0.76	0.62	-0.28	117.97	
300.00	0.45	143.72	300.00	-0.97	-0.14	-0.97	0.65	0.24	-158.44	
400.00	0.36	301.33	400.00	-1.13	-0.18	-1.13	0.79	-0.09	157.61	
500.00	0.74	155.94	499.99	-1.55	-0.18	-1.55	1.06	0.38	-145.39	
600.00	0.22	281.85	599.99	-2.10	-0.11	-2.10	0.89	-0.52	125.91	
700.00	0.70	148.63	699.99	-2.59	0.02	-2.59	0.87	0.48	-133.22	
800.00	0.26	329.14	799.99	-2.91	0.23	-2.91	0.96	-0.44	-179.49	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NRC 3C-8HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Site:</b>	NRC 14-8HZ PAD	<b>MD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Well:</b>	NRC 3C-8HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
900.00	0.62	189.41	899.99	-3.25	0.02	-3.25	0.84	0.36	-139.73
1,000.00	0.44	53.94	999.98	-3.56	0.24	-3.56	0.98	-0.18	-135.47
1,100.00	0.51	295.00	1,099.98	-3.15	0.15	-3.15	0.82	0.07	-118.94
1,134.00	0.61	323.62	1,133.98	-2.94	-0.09	-2.94	0.86	0.29	84.18
<b>LAST SURFACE GYRO SURVEY</b>									
1,258.00	0.69	202.81	1,257.98	-3.10	-0.78	-3.10	0.92	0.07	-97.43
<b>9 5/8"</b>									
1,363.00	1.61	186.81	1,362.95	-5.15	-1.20	-5.15	0.92	0.87	-15.23
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
1,455.00	3.21	182.15	1,454.87	-9.01	-1.45	-9.01	1.75	1.74	-5.07
1,564.00	5.17	188.13	1,563.57	-16.92	-2.26	-16.92	1.84	1.80	5.49
1,656.00	6.13	188.73	1,655.13	-25.88	-3.59	-25.88	1.05	1.04	0.65
1,747.00	6.98	183.85	1,745.53	-36.20	-4.70	-36.20	1.12	0.93	-5.36
1,839.00	7.42	179.87	1,836.81	-47.72	-5.06	-47.72	0.72	0.48	-4.33
1,930.00	6.75	177.82	1,927.11	-58.94	-4.84	-58.94	0.79	-0.74	-2.25
2,023.00	6.19	180.73	2,019.52	-69.41	-4.70	-69.41	0.70	-0.60	3.13
2,114.00	6.67	187.47	2,109.95	-79.56	-5.45	-79.56	0.98	0.53	7.41
2,206.00	7.49	193.15	2,201.25	-90.69	-7.51	-90.69	1.17	0.89	6.17
2,298.00	8.91	192.49	2,292.30	-103.49	-10.41	-103.49	1.55	1.54	-0.72
2,389.00	9.84	187.82	2,382.09	-118.07	-13.00	-118.07	1.32	1.02	-5.13
2,480.00	10.84	184.79	2,471.61	-134.30	-14.77	-134.30	1.25	1.10	-3.33
2,572.00	9.91	183.76	2,562.10	-150.83	-16.01	-150.83	1.03	-1.01	-1.12
2,756.00	10.89	177.43	2,743.08	-183.99	-16.27	-183.99	0.82	0.53	-3.44
2,848.00	10.18	179.63	2,833.53	-200.80	-15.83	-200.80	0.89	-0.77	2.39
2,940.00	10.35	181.31	2,924.06	-217.19	-15.96	-217.19	0.37	0.18	1.83
3,032.00	12.15	186.77	3,014.29	-235.07	-17.29	-235.07	2.27	1.96	5.93
3,124.00	11.40	189.89	3,104.36	-253.64	-20.00	-253.64	1.07	-0.82	3.39
3,215.00	9.59	193.58	3,193.83	-269.87	-23.32	-269.87	2.12	-1.99	4.05
3,402.00	9.69	188.66	3,378.19	-300.57	-29.35	-300.57	0.44	0.05	-2.63
3,496.00	11.03	191.15	3,470.66	-317.22	-32.28	-317.22	1.50	1.43	2.65
3,590.00	9.97	191.56	3,563.08	-334.01	-35.65	-334.01	1.13	-1.13	0.44
3,684.00	8.96	180.41	3,655.81	-349.31	-37.33	-349.31	2.22	-1.07	-11.86
3,779.00	10.55	188.75	3,749.44	-365.30	-38.71	-365.30	2.24	1.67	8.78
3,873.00	11.27	184.87	3,841.74	-382.96	-40.80	-382.96	1.09	0.77	-4.13
3,967.00	9.75	185.83	3,934.16	-400.03	-42.39	-400.03	1.63	-1.62	1.02
4,156.00	13.17	182.36	4,119.37	-437.48	-44.90	-437.48	1.85	1.81	-1.84
4,250.00	12.74	185.83	4,210.98	-458.49	-46.39	-458.49	0.95	-0.46	3.69
4,344.00	12.40	179.48	4,302.73	-478.89	-47.35	-478.89	1.51	-0.36	-6.76
4,439.00	14.18	174.72	4,395.18	-500.68	-46.19	-500.68	2.20	1.87	-5.01
4,533.00	13.29	181.45	4,486.50	-522.95	-45.40	-522.95	1.94	-0.95	7.16
4,627.00	10.87	188.40	4,578.42	-542.52	-46.97	-542.52	3.00	-2.57	7.39
4,816.00	12.33	179.11	4,763.57	-580.33	-49.26	-580.33	1.25	0.77	-4.92
4,910.00	14.48	179.13	4,855.00	-602.12	-48.93	-602.12	2.29	2.29	0.02
5,099.00	11.05	181.40	5,039.30	-643.87	-49.01	-643.87	1.83	-1.81	1.20

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NRC 3C-8HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Site:</b>	NRC 14-8HZ PAD	<b>MD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Well:</b>	NRC 3C-8HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,194.00	10.41	185.59	5,132.64	-661.51	-50.07	-661.51	1.06	-0.67	4.41
5,288.00	9.47	185.08	5,225.23	-677.67	-51.58	-677.67	1.00	-1.00	-0.54
5,382.00	10.41	182.04	5,317.82	-693.86	-52.57	-693.86	1.14	1.00	-3.23
5,477.00	9.80	184.96	5,411.35	-710.49	-53.57	-710.49	0.84	-0.64	3.07
5,571.00	10.06	190.60	5,503.94	-726.53	-55.78	-726.53	1.07	0.28	6.00
5,666.00	8.81	188.54	5,597.65	-741.88	-58.38	-741.88	1.36	-1.32	-2.17
5,760.00	9.36	189.78	5,690.47	-756.53	-60.75	-756.53	0.62	0.59	1.32
5,854.00	11.38	188.83	5,782.93	-773.23	-63.47	-773.23	2.16	2.15	-1.01
5,948.00	10.03	184.89	5,875.30	-790.55	-65.59	-790.55	1.63	-1.44	-4.19
6,042.00	9.35	183.59	5,967.96	-806.33	-66.77	-806.33	0.76	-0.72	-1.38
6,137.00	10.17	187.53	6,061.58	-822.35	-68.35	-822.35	1.11	0.86	4.15
6,231.00	10.06	191.85	6,154.12	-838.61	-71.13	-838.61	0.82	-0.12	4.60
6,326.00	11.44	188.19	6,247.45	-856.05	-74.17	-856.05	1.62	1.45	-3.85
6,420.00	11.08	189.06	6,339.64	-874.20	-76.92	-874.20	0.42	-0.38	0.93
6,514.00	9.50	186.03	6,432.13	-890.84	-79.16	-890.84	1.78	-1.68	-3.22
6,609.00	6.97	179.94	6,526.14	-904.40	-79.98	-904.40	2.81	-2.66	-6.41
6,703.00	7.10	179.94	6,619.44	-915.91	-79.96	-915.91	0.14	0.14	0.00
6,798.00	6.10	187.84	6,713.81	-926.78	-80.65	-926.78	1.42	-1.05	8.32
6,892.00	4.16	200.94	6,807.43	-934.92	-82.55	-934.92	2.40	-2.06	13.94
6,986.00	2.99	196.73	6,901.25	-940.45	-84.47	-940.45	1.27	-1.24	-4.48
7,081.00	1.57	178.16	6,996.17	-944.12	-85.14	-944.12	1.67	-1.49	-19.55
7,128.00	1.18	176.80	7,043.16	-945.25	-85.10	-945.25	0.83	-0.83	-2.89
7,175.00	2.99	7.63	7,090.14	-944.52	-84.91	-944.52	8.84	3.85	-359.94
7,222.00	7.38	0.36	7,136.94	-940.28	-84.72	-940.28	9.43	9.34	-15.47
7,269.00	10.92	358.45	7,183.33	-932.81	-84.83	-932.81	7.56	7.53	-4.06
7,316.00	14.25	359.63	7,229.19	-922.57	-84.98	-922.57	7.11	7.09	2.51
7,364.00	16.56	356.03	7,275.47	-909.84	-85.49	-909.84	5.21	4.81	-7.50
7,411.00	19.06	1.32	7,320.22	-895.48	-85.78	-895.48	6.33	5.32	11.26
7,458.00	22.47	5.77	7,364.16	-878.87	-84.70	-878.87	7.99	7.26	9.47
7,505.00	25.12	359.43	7,407.17	-859.95	-83.90	-859.95	7.83	5.64	-13.49
7,553.00	29.23	354.24	7,449.86	-838.09	-85.18	-838.09	9.88	8.56	-10.81
7,600.00	32.60	350.56	7,490.19	-814.17	-88.41	-814.17	8.22	7.17	-7.83
7,647.00	39.11	350.14	7,528.26	-787.05	-93.03	-787.05	13.86	13.85	-0.89
7,694.00	43.69	348.68	7,563.51	-756.51	-98.75	-756.51	9.96	9.74	-3.11
7,741.00	49.85	350.31	7,595.68	-722.85	-104.97	-722.85	13.35	13.11	3.47
7,788.00	53.56	353.85	7,624.81	-686.33	-110.02	-686.33	9.86	7.89	7.53
7,836.00	57.69	356.55	7,651.91	-646.87	-113.31	-646.87	9.78	8.60	5.63
7,883.00	61.52	358.43	7,675.69	-606.37	-115.07	-606.37	8.85	8.15	4.00
7,930.00	65.54	0.25	7,696.63	-564.31	-115.55	-564.31	9.23	8.55	3.87
7,977.00	70.78	1.01	7,714.11	-520.71	-115.06	-520.71	11.25	11.15	1.62
8,024.00	76.76	0.98	7,727.24	-475.61	-114.28	-475.61	12.72	12.72	-0.06
8,119.00	87.95	0.98	7,739.86	-381.61	-112.67	-381.61	11.78	11.78	0.00
8,174.00	89.27	0.56	7,741.19	-326.64	-111.93	-326.64	2.52	2.40	-0.76

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NRC 3C-8HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Site:</b>	NRC 14-8HZ PAD	<b>MD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Well:</b>	NRC 3C-8HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>7" (48 FSL 2150 FWL)</b>									
8,238.00	90.81	0.07	7,741.15	-262.64	-111.58	-262.64	2.52	2.40	-0.76
8,333.00	90.84	0.83	7,739.78	-167.65	-110.83	-167.65	0.80	0.03	0.80
8,427.00	91.75	0.80	7,737.65	-73.69	-109.50	-73.69	0.97	0.97	-0.03
8,522.00	92.49	1.18	7,734.14	21.23	-107.86	21.23	0.88	0.78	0.40
8,616.00	90.84	359.94	7,731.41	115.18	-106.94	115.18	2.20	-1.76	-1.32
8,711.00	89.56	357.92	7,731.08	210.16	-108.71	210.16	2.52	-1.35	-2.13
8,805.00	89.60	356.28	7,731.77	304.03	-113.47	304.03	1.75	0.04	-1.74
8,899.00	88.99	354.55	7,732.92	397.72	-120.98	397.72	1.95	-0.65	-1.84
8,993.00	90.17	356.11	7,733.61	491.40	-128.64	491.40	2.08	1.26	1.66
9,088.00	90.77	356.26	7,732.83	586.19	-134.96	586.19	0.65	0.63	0.16
9,182.00	90.81	354.90	7,731.54	679.90	-142.20	679.90	1.45	0.04	-1.45
9,277.00	88.89	354.28	7,731.79	774.47	-151.16	774.47	2.12	-2.02	-0.65
9,371.00	88.22	354.19	7,734.16	867.96	-160.59	867.96	0.72	-0.71	-0.10
9,466.00	88.39	355.60	7,736.97	962.54	-169.04	962.54	1.49	0.18	1.48
9,560.00	89.53	356.77	7,738.67	1,056.32	-175.30	1,056.32	1.74	1.21	1.24
9,654.00	89.80	358.05	7,739.22	1,150.22	-179.54	1,150.22	1.39	0.29	1.36
9,749.00	90.23	359.36	7,739.20	1,245.19	-181.69	1,245.19	1.45	0.45	1.38
9,843.00	91.17	0.39	7,738.05	1,339.18	-181.90	1,339.18	1.48	1.00	1.10
9,938.00	91.61	2.36	7,735.74	1,434.12	-179.62	1,434.12	2.12	0.46	2.07
10,032.00	90.60	3.96	7,733.93	1,527.95	-174.44	1,527.95	2.01	-1.07	1.70
10,127.00	90.81	3.10	7,732.76	1,622.77	-168.59	1,622.77	0.93	0.22	-0.91
10,221.00	91.45	3.06	7,730.91	1,716.61	-163.54	1,716.61	0.68	0.68	-0.04
10,315.00	88.76	1.21	7,730.74	1,810.53	-160.04	1,810.53	3.47	-2.86	-1.97
10,410.00	88.32	0.10	7,733.16	1,905.49	-158.95	1,905.49	1.26	-0.46	-1.17
10,504.00	89.06	359.07	7,735.31	1,999.47	-159.63	1,999.47	1.35	0.79	-1.10
10,599.00	89.43	358.20	7,736.56	2,094.43	-161.90	2,094.43	1.00	0.39	-0.92
10,693.00	89.56	359.27	7,737.39	2,188.40	-163.97	2,188.40	1.15	0.14	1.14
10,787.00	90.67	0.33	7,737.20	2,282.40	-164.30	2,282.40	1.63	1.18	1.13
10,881.00	91.44	359.26	7,735.47	2,376.38	-164.63	2,376.38	1.40	0.82	-1.14
10,976.00	89.50	358.85	7,734.69	2,471.36	-166.20	2,471.36	2.09	-2.04	-0.43
11,070.00	89.93	0.35	7,735.16	2,565.35	-166.86	2,565.35	1.66	0.46	1.60
11,165.00	89.26	0.64	7,735.83	2,660.35	-166.04	2,660.35	0.77	-0.71	0.31
11,259.00	89.87	3.02	7,736.54	2,754.29	-163.04	2,754.29	2.61	0.65	2.53
11,353.00	90.60	2.85	7,736.15	2,848.16	-158.22	2,848.16	0.80	0.78	-0.18
11,448.00	91.38	1.07	7,734.51	2,943.09	-154.97	2,943.09	2.05	0.82	-1.87
11,542.00	90.87	0.96	7,732.67	3,037.06	-153.31	3,037.06	0.56	-0.54	-0.12
11,637.00	89.16	2.44	7,732.64	3,132.01	-150.49	3,132.01	2.38	-1.80	1.56
11,731.00	90.03	2.08	7,733.31	3,225.93	-146.78	3,225.93	1.00	0.93	-0.38
11,826.00	90.77	0.80	7,732.64	3,320.90	-144.40	3,320.90	1.56	0.78	-1.35
11,920.00	89.97	359.79	7,732.04	3,414.89	-143.91	3,414.89	1.37	-0.85	-1.07
12,014.00	89.63	358.59	7,732.37	3,508.88	-145.24	3,508.88	1.33	-0.36	-1.28
12,109.00	90.44	0.68	7,732.31	3,603.87	-145.85	3,603.87	2.36	0.85	2.20

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NRC 3C-8HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Site:</b>	NRC 14-8HZ PAD	<b>MD Reference:</b>	GL 5052 & KB 25 @ 5077.00ft (H&P 311)
<b>Well:</b>	NRC 3C-8HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,203.00	90.70	359.70	7,731.37	3,697.86	-145.53	3,697.86	1.08	0.28	-1.04	
12,298.00	88.69	358.50	7,731.88	3,792.85	-147.03	3,792.85	2.46	-2.12	-1.26	
12,392.00	88.89	357.17	7,733.86	3,886.76	-150.58	3,886.76	1.43	0.21	-1.41	
12,486.00	89.73	359.00	7,734.99	3,980.69	-153.72	3,980.69	2.14	0.89	1.95	
12,580.00	90.67	357.91	7,734.67	4,074.65	-156.25	4,074.65	1.53	1.00	-1.16	
12,674.00	89.53	359.49	7,734.50	4,168.62	-158.38	4,168.62	2.07	-1.21	1.68	
12,769.00	89.83	358.53	7,735.03	4,263.61	-160.03	4,263.61	1.06	0.32	-1.01	
12,867.00	90.77	357.56	7,734.52	4,361.55	-163.37	4,361.55	1.38	0.96	-0.99	
<b>LAST SDI MWD PRODUCTION SURVEY</b>										
12,929.00	90.77	357.56	7,733.69	4,423.49	-166.01	4,423.49	0.00	0.00	0.00	
<b>SDI PROJECTION TO TD</b>										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,258.00	1,257.98	9 5/8"	9.625	12.250	
8,174.00	7,741.19	7" (48 FSL 2150 FWL)	7.000	7.500	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
100.00	100.00	-0.43	-0.03	FIRST SURFACE GYRO SURVEY	
1,134.00	1,133.98	-2.94	-0.09	LAST SURFACE GYRO SURVEY	
1,363.00	1,362.95	-5.15	-1.20	FIRST SDI MWD PRODUCTION SURVEY	
12,867.00	7,734.52	4,361.55	-163.37	LAST SDI MWD PRODUCTION SURVEY	
12,929.00	7,733.69	4,423.49	-166.01	SDI PROJECTION TO TD	

Checked By: _____	Approved By: _____	Date: _____
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